CLAIMS:

1. A method of communicating between a first node and a second node in an ad hoc polling based communication infrastructure, the method comprising steps of:

defining frames for the first and the second nodes, said frames comprising checkpoints;

checking by the first node one or more of the checkpoints for presence of the second node;

adjusting a first node checking intensity in response to results of said checking step; and

communicating by transmitting a signal from said first node to said second node in accordance with the adjusted first node checking intensity.

2. The method of claim 1, wherein positions of the checkpoints are substantially periodic.

3. The method of claim 1, wherein positions of the checkpoints are pseudo randomly generated.

4. The method of claim 1, wherein the step of adjusting a first node checking intensity comprises:

increasing the first node checking intensity by changing one or more checkpoints to alive checkpoints.

5. The method of claim 1, wherein said frames are time slot pairs for communication between the first and second nodes.

6. The method of claim 5, wherein said frames each contain one or more of an offset, a time interval, usage data and utilization data for the said checkpoints.

7. The method of claim 1, wherein the step of checking comprises:

increasing a checkpoint usage value in response to both the first node and the second node being present at one of said checkpoints.

8. The method of claim 1, wherein the step of checking comprises:

decreasing a checkpoint usage value in response to either the first node or the second node not being present.

9. The method of claim 1, wherein the step of checking comprises:

increasing a checkpoint utilization value in response to a succesful data transmission at one or more of said checkpoints.

10. The method of claim 1, wherein the step of checking comprises:

decreasing a checkpoint utilization value in response to there having been no data transmission at said checkpoints.

11. The method of claim 1, wherein the step of adjusting comprises:

changing the first node checking intensity in response to a checkpoint utilization value or a checkpoint usage value.

12. The method of claim 1, wherein the step of adjusting comprises:

changing the first node checking intensity following a successful poll, the first node checking intensity being changed in response to a checkpoint usage value $\mu^{(i)}$ determined as follows:

$$\mu^{(i)} = q_{usage} \times \mu^{(i)} + \left(1 - q_{usage}\right) \times 1$$

wherein q_{usage} is a parameter of the moving average method.

13. The method of claim 1, wherein the step of adjusting comprises:

changing the first node checking intensity following an exchange of user data, the first node checking intensity being changed in response to a checkpoint utilization value $\rho^{(i)}$ determined as follows:

$$\rho_{incr}^{(i)} = q_{uti,incr} \times \rho_{incr}^{(i)} + \left(1 - q_{uti,incr}\right) \times 1$$

$$\rho_{decr}^{(i)} = q_{uti,decr} \times \rho_{decr}^{(i)} + \left(1 - q_{uti,decr}\right) \times 1$$

where parameters $q_{uti,incr}$, $q_{uti,decr}$ determine a time scale on which the utilization value is averaged.

14. The method of claim 11, wherein the step of adjusting comprises:

increasing the first node checking intensity in response to a checkpoint utilization value or a checkpoint usage value being greater than a predetermined value.

15. The method of claim 11, wherein the step of adjusting comprises:

decreasing the first node checking intensity in response to a checkpoint utilization value or a checkpoint usage value being lower than a predetermined value.

16. The method of claim 11, wherein the step adjusting comprises:

decreasing the first node checking intensity in response to a checkpoint utilization value being lower than a predetermined value.

17. The method of claim 1, wherein the step of adjusting a first node checking intensity comprises:

decreasing the first node checking intensity by removing one or more checkpoints from among the first node checkpoints being checked.

18. The method of claim 1, wherein the second node is simultaneously a member of a first piconet and a second piconet which form a scatternet.

19. The method of claim 1, wherein the first node is a master and the second node is a slave.

20. The method of claim 19, wherein the first node actively checks for the second node by sending a packet.

21. The method of claim 22, wherein the second node passively checks the first node by listening for a packet.

23. The method of claim 1, wherein a first node checking period is $T_{(check)}^{(i)}$ for an *ith* link of the first node.

24. The method of claim 1, further comprising steps of:

waiting to send data packets by the first node until a next checkpoint at which the second node is expected to be present; and

initiating a data transmission from the first node to the second node.

25. The method of claim 1, further comprising a step of:

increasing a first node checking intensity in response to an amount of user data to be transmitted between the first and second nodes.

26. The method of claim 1, wherein the polling based communication infrastructure is a Bluetooth system.

27. A system comprising a node in an ad hoc polling based communication infrastructure system, the node comprising:

a transmit unit for transmitting signals to other nodes;

a receive unit for receiving signals from the other nodes, said received signals comprising results of checking for presence of the other nodes;

a scheduling unit in communication with the transmit unit and the receive unit;

a checkpoint information maintenance unit in communication with the transmit unit and the receive unit; and

a checkpoint generation unit which generates checkpoints having a node checking intensity based upon the results of checking for presence of the other nodes.

28. The system of claim 27, wherein the node checking intensity is adjusted in response to the results of checking for presence of the other nodes.

29. The system of claim 27, further comprising:

a scatternet, wherein the node is simultaneously a member of a first piconet and a second piconet which form the scatternet.